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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,086	12/11/2001	Jonathan J. Bernstein	112222.128	9491

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EXAMINER	
ALANKO, ANITA KAREN	

ART UNIT	PAPER NUMBER
1765	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,086	BERNSTEIN ET AL.	
	Examiner	Art Unit	
	Anita K Alanko	1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/24/03 RCE*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11, 14-36* is/are rejected.

7)☒ Claim(s) *12 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

In response to the petition that has been granted (9/25/03), a request for continued examination under 37 CFR 1.114 filed on 9/24/03 and has been entered. An action on the merits follows. In view of the newly cited art, the allowable subject matter (Paper No. 3) is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 25-27, 29 and 31 are rejected under 35 U.S.C. 102(a) as being anticipated by Golecki et al (US 2001/0049193 A1).

Golecki discloses a microelectromechanical device (and a method for making it) comprising:

at least one flexible member formed from an alloy comprising: a noble metal and alloying elements comprising gold and nickel (paragraph [0043]).

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claims 1-11, 18, 20, 25-27, 29 and 31-32 are rejected under 35 U.S.C. 102(a) as being anticipated by Sun (US 6,307,452 B1).

Sun discloses a microelectromechanical device (and a method for making it) comprising:

at least one flexible member 20, 22 formed from an alloy comprising: a noble metal and alloying elements comprising gold and rhodium, gold and nickel, platinum and rhodium, or platinum and gold (col.4, lines 35-37).

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claims 1-11 and 25-30 are rejected under 35 U.S.C. 102(a) as being anticipated by Hill et al (US 6,236,139 B1).

Hill discloses a microelectromechanical device comprising:

at least one flexible member formed from an alloy comprising: a noble metal comprising gold or palladium and one or more alloying elements comprising ruthenium, rhodium, palladium or gold (col.4, lines 45-47).

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claims 1-11, 14, 20 and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Pearson et al (US 2003/0216700 A1).

Pearson discloses a microelectromechanical device comprising:

at least one flexible member 9 formed from an alloy comprising: a noble metal comprising gold or platinum and one or more alloying elements comprising iridium, gold, or nickel (paragraph [0030], [0037]).

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claims 1-11, 16 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Khandros et al (US 6,476,333 B1).

Khandros discloses a microelectromechanical device comprising:

at least one flexible member 116 formed from an alloy comprising: a noble metal comprising platinum or palladium and one or more alloying elements comprising ruthenium, palladium, gold, tungsten, or nickel (col.5, lines 49-56).

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claims 1-11, 22, 26, 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Sayama (JP 05-174932 A).

Sayama discloses a microelectromechanical device comprising:

at least one flexible member 1 formed from an alloy comprising: a noble metal comprising gold, platinum or palladium and one or more alloying elements comprising palladium or gold (see abstract).

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11, 18-21, 23, 25-27, 29 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (US 6,307,452 B1).

The discussion of Sun from above is repeated here. As to claims 19, 21 and 23, Sun does not disclose the exact alloy composition. Since Sun is silent as to the composition, it can encompass a wide range, which one with ordinary skill in the art would know to optimize based on the final result desired since the composition determines the properties of the final product. It would have been obvious to one with ordinary skill in the art to deposit to the composition cited because the composition appears to reflect a result-effective variable that can be optimized. See MPEP 2144.05 IIB.

Claims 1-11, 14-15, 20 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson et al (US 2003/0216700 A1).

The discussion of Pearson from above is repeated here. As to claim 15, Pearson does not disclose the exact alloy composition. Since Pearson is silent as to the composition, it can encompass a wide range, which one with ordinary skill in the art would know to optimize based on the final result desired since the composition determines the properties of the final product. It would have been obvious to one with ordinary skill in the art to deposit to the composition cited because the composition appears to reflect a result-effective variable that can be optimized. See MPEP 2144.05 IIB.

Claims 1-11, 16-17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khandros et al (US 6,476,333 B1).

The discussion of Khandros from above is repeated here. As to claim 17, Khandros does not disclose the exact alloy composition. Since Khandros is silent as to the composition, it can encompass a wide range, which one with ordinary skill in the art would know to optimize based on the final result desired since the composition determines the properties of the final product. It would have been obvious to one with ordinary skill in the art to deposit to the composition cited because the composition appears to reflect a result-effective variable that can be optimized. See MPEP 2144.05 IIB.

Claims 1-11, 24, 26-27, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duchet (FR 2458151 A).

Duchet disclose a microelectromechanical device comprising a flexible member formed from Ni-Cr-Au (see abstract). As to claim 24, Duchet does not disclose the exact composition. Since Duchet is silent as to the composition, it can encompass a wide range, which one with ordinary skill in the art would know to optimize based on the final result desired since the composition determines the properties of the final product. It would have been obvious to one with ordinary skill in the art to deposit to the composition cited because the composition appears to reflect a result-effective variable that can be optimized. See MPEP 2144.05 IIB.

Since the device is formed from the same materials as the instant invention, the same properties of performance characteristic, electrical conductivity, solid solubility and amount of precipitates are expected.

Claims 1-11, 25-27, 29, 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golecki et al (US 2001/0049193 A1).

The discussion of Golecki from above is repeated here.

As to claim 32, Golecki does not explicitly disclose to deposit a sacrificial layer. However, sacrificial layers are conventionally used in MEMS processing. It would have been obvious to one with ordinary skill in the art to deposit a sacrificial layer in the method of Golecki because it is a conventional technique in MEMS processing.

As to claims 33-36, Golecki discloses to use sputtering (paragraph [0054]) and to deposit a chromium adhesion layer (Fig.7).

Allowable Subject Matter

Claims 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach or suggest a flexible member made from an alloy of platinum, rhodium and ruthenium as in the context of claim 12.

The closest prior art, Hill, suggests an alloy with rhodium and ruthenium, but does not suggest to add platinum. There is no motivation to add this element to the alloy.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art shows micromechanical devices with noble alloy layers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita K Alanko whose telephone number is 571-272-1458. The examiner can normally be reached on Mon,Tues & Fri: 8:30 am-5 pm; Wed&Thurs:10 am-2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anita K. Alanko

Anita K Alanko
Primary Examiner
Art Unit 1765